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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/929,237
Filing Date: August 13, 2001
Appellant(s): GASS ET AL.

David A. Fanning
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 03/30/07 appealing from the Office action mailed 11/01/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

a. Appeal of application serial number 09/929,221 (applied brief filed, awaiting examiner's answer).

b. Appeal of application serial number 09/929,227 (fully briefed).

c. Appeal of application serial number 09/929,238 (fully briefed).

d. Appeal of application serial number 09/929,242 (fully briefed).

e. Appeal of application serial number 10/053,390 (fully briefed).

f. Appeal of application serial number 10/100,211 (fully briefed).

g. Appeal of application serial number 10/146,527 (reply brief due May 5, 2007).

h. Appeal of application serial number 10/345,630 (applied brief filed, awaiting examiner's answer).

i. Appeal of application serial number 11/098,984 (fully briefed).

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2,785,710	**MOWERY, JR**	**03-1957**
4,117,752	**YONEDA**	**10-1978**
6,564,909	**RAZZANO**	**05-2003**
6,325,195	**DOHERTY**	**12-2001**
3,863,208	**BALBAN**	**01-1975**
3,716,113	**KOBAYASHI et al.**	**02-1973**

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

A. Claims 20 and 34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda (4,117,752) in view of Mowery, JR (2,785,710), hereinafter Mowery, and in further view of Razzano (6,564,909). Regarding claim 20, Yoneda teaches a woodworking machine including a cutting tool 14 for cutting workpieces, a motor 10 configured to drive the cutting tool 14 and detection system configured to detect a dangerous condition between a person and the cutting tool 14. Yoneda also teaches a reaction system 20 controllable to stop the cutting tool 14 if the dangerous condition is detected by the detection system. See Figs. 1-5 and col. 2, lines 14-

65 and col. 3, lines 14-26 in Yoneda. Yoneda does not teach a control system configured to determine the operability of the reaction system without having to operate the reaction system.

Yoneda teaches a bake mechanism 20 for the saw 14. Yoneda teaches that the brake mechanism is a clamp brake. Mowery teaches a brake mechanism that includes brake shoes 27. See Figs. 1-2 and col. 1, lines 70-73 and col. 2, lines 1-5 in Mowery. It would have been obvious to a person of ordinary skill in the art to replace Yoneda's brake mechanism with the brake mechanism, as taught by Mowery, since both the brake mechanism in Yoneda and the brake mechanism in Mowery are functionally equivalents and both stop the saw from rotating.

Razzano teaches a brake mechanism or a reaction system including brake pad 1 for stopping rotation of disk 2. Razzano also teaches a control system 32 configured to determine the operability of the reaction system without having to operate the reaction system. It should be noted that the wear of the brake pad 1 or the friction block 8 is monitored by the control system 32 at all times which also includes the time that the reaction system in not operating. See col. 1, lines 15-20 and col. 3, lines 1-50. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified by Mowery, with the control system, as taught by Razzano in order to monitor the brake shoes and detect the wear of the brake shoes and prevent possible injuries.

Regarding claim 34, Yoneda teaches everything noted above including that the reaction system is controllable to disable the cutting tool by stopping the cutting tool 14.

B. Claims 1, 11, 21, 28, 30 and 32 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda in view of Mowery and in further view of Razzano and Doherty (6,235,195). Regarding claim 1, Yoneda teaches a woodworking machine including a cutting

tool 14 for cutting workpieces, a motor 10 configured to drive the cutting tool 14, and detection system configured to detect a dangerous condition between a person and the cutting tool 14. Yoneda also teaches a reaction system 20 controllable to stop the cutting tool 14 if the dangerous condition is detected by the detection system. See Figs. 1-5 and col. 2, lines 14-65 and col. 3, lines 14-26 in Yoneda. Yoneda does not teach a control system configured to determine the operability of the reaction system without having to operate the reaction system and to disable the motor if the reaction system is inoperable.

Yoneda teaches a bake mechanism 20 for the saw 14. Yoneda teaches that the brake mechanism is a clamp brake. Mowery teaches a brake mechanism that includes brake shoes 27. See Figs. 1-2 and col. 1, lines 70-73 and col. 2, lines 1-5 in Mowery. It would have been obvious to a person of ordinary skill in the art to replace Yoneda's brake mechanism with the brake mechanism, as taught by Mowery, since both the brake mechanism in Yoneda and the brake mechanism in Mowery are functionally equivalents and both stop the saw from rotating.

Razzano teaches a brake mechanism or a reaction system including brake pad 1 for stopping rotation of disk 2. Razzano also teaches a control system 32 configured to determine the operability of the reaction system without having to operate the reaction system. It should be noted that the wear of the brake pad 1 or the friction block 8 is monitored by the control system 32 at all times which also includes the time that the reaction system in not operating. See col. 1, lines 15-20 and col. 3, lines 1-50. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified by Mowery, with the control system, as taught by Razzano in order to monitor the brake shoes and detect the wear of the brake shoes and prevent possible injuries.

Yoneda, as modified above, teaches that the control system is configured to determine the operability of the reaction system without having to operate the reaction system. Yoneda, as modified by Razzano, teaches that if the reaction system is not operable a waning signal is generated. See lines 15-20 in Razzano. The warning signal is generated in the case that the brake shoes wear beyond the threshold. This is also taught in Kobayashi et al. (3,716,113). Yoneda, as modified above does not teach that the control system disables the motor if the reaction system is not operable. However, the use of control system to generate a warning signal in the case of emergency or to disable the motor instead of generating a warning signal in the case of emergency is well known in the art such as taught by Doherty. Doherty teaches a control system that generates a warning signal and disables the motor 80 in the case of inoperability of the safety panel that covers a machine. See Figs. 1-3 and col. 3, lines 40-67 and col. 4, lines 1-67 in Doherty. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified above, with the control system that generates warning signal and shuts down the motor in the case that the reaction system in not operable. Because, shutting down the motor and generating a warning signal simultaneously improves the reaction system and safety of the machine.

Regarding claim 11, Yoneda, as modified by above, teaches everything noted above including that the brake mechanism or the reaction system 20 is adapted to be electrically coupled to the control system, as modified by Razzano and Doherty, and where the control system is configured to disable the motor if the brake mechanism or the reaction system is not coupled to the control system.

Regarding claim 21,Yoneda, as modified above, teaches everything noted above including that the control system is adapted to at least check a portion of the brake system or the reaction system to verify that the portion of the brake system or the reaction system is operational. Yoneda's control system, as modified by above, tests the braking system as the whole, which also includes a portion of the braking system. Yoneda's control system, as modified by above, also is not running or actuating the motor if the brake system or the reaction system 20 is not operational.

Regarding claims 28 and 30, Yoneda as modified above, teaches everything noted above including a reaction system adapted to perform a specified action upon detection of a dangerous condition and a self-test system adapted to test operability of the brake system.

Regarding claim 32, Yoneda teaches everything noted above including that the reaction system is controllable to disable the cutting tool by stopping the cutting tool 14.

C. Claims 2 and 3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yoneda in view of Mowery, Razzano, and Doherty, as applied to claim 1, and in further view of Balban (3,863,208). Regarding claims 2 and 3, Yoneda, as modified above, teaches everything noted above except that the reaction system includes a capacitor adapted to store electrical charge and to trigger the disabling of the cutting tool upon discharge of the at least part of the electrical charge and were the control system is configured to determine the capacitance of the capacitor. Yoneda, as modified above, also fails to expressly teach that the reaction system includes a fusible member and where the control system is configured to determine the condition of the fusible member. Yoneda, as modified above, teaches that the motor is disabled if the brake or the reaction system does not properly function. Yoneda, as modified above, also teaches that the

electric circuit provides the single for disabling the motor. Yoneda does not expressly teach that electric circuit has a capacitor that discharges part of it discharge for triggering the disabling of the cutting tool. However, Balban teaches a system to monitor an electric circuit including a sensing portion for circuit malfunctions and provide a warning system to the operator vehicle. Balban also teaches a control system that monitors the electric charge level in the capacitor of a reaction system. Balban also teaches that the capacitor triggers the firing circuit responsible for inflating a confinement adjacent the vehicle steering wheel. Balban also teaches that reaction system includes a fusible member F1-F4 and where the control system is configured to determine the condition of the fusible member. It should be noted that the control system monitors the whole electric circuit for malfunctioning. Therefore, the condition of fuse of the reaction system inherently is determined by the control system. See Figs. 1-4 and col. 2, lines 21-47 and col.3, lines 42-58 in Balban. It would have been obvious to one skilled in the art at the time of the invention to equip Yoneda's reaction system, as modified above, with the capacitor and fuse, as taught by Balban, in order to disable the cutting tool with an electric circuit that can be monitored for malfunctions and consequently enhance the safety system of the cutting tool.

(10) Response to Argument

a. The declaration filed on 04/25/06 under 37 CFR 1.131 has been considered but is ineffective to overcome the Razzano (6,564,909) reference. The scope of the declaration is not commensurate with the scope of the claims. In this case, neither of the provisional application numbers 60/157,340 and 60/182,866 discloses the claimed invention. For example, the provisional applications fail to disclose a control system or self-test system that is configured to determine the operability of the reaction system without having to operate the reaction system

and to disable the motor if the reaction system is inoperable, as set forth in claims 1, 20, 28 and 30. The provisional applications also do not disclose that the control system is configured to determine the capacitance of the capacitor or the electrical charge stored on the capacitor, as set forth respectively in claims 2 and 3. The provisional applications also do not disclose that the control system is configured to disable the motor if the reaction system is not coupled to the control system, as set forth in claim 11, and the control system adapted not to actuate the motor unless the portion of the reaction system is operational, as set forth in claim 21. The claimed subject matter has not been clearly disclosed in the provisional applications. Therefore, the effective date for the claimed subject matter is 08/14/2000 which is after the filing date of the U.S. Patent (6,564,909). Appellant's argument that provisional application No. 60/157,340 clearly discloses a control system "adapted to test at least a portion of the reaction system to verify that the portion of the reaction system is operational without having to operate the reaction system" is not persuasive. Firstly, the provisional application No. 60/157,340 does not even teach a control system that "disable the motor if the reaction system is inoperable" as set forth in claims 1 and 30. See page 9, lines 6-11 in the appeal brief. Secondly, the provisional application No. 60/157,340 does not teach a control system that determines the operability of the reaction system without having to operate the reaction system that is controllable to disable the cutting tool. Provisional application discloses, "it would be desirable to provide various self-test checks and stat up delays to insure that a proper fuse was in place and the system was operating properly and to prevent inadvertently triggering of the fuse during up or power down." It is not clear what device is considered to be the reaction system and what device is considered to be the control system. It is also not clear how the operability of the reaction

system is tested without having to operate the reaction system. It should be noted that the reaction system in the instant application is considered to be a system that is controllable to disable the cutting tool and includes capacitors adapted to store electrical charge and to trigger the disabling of the cutting too (as set forth in claims 2-3). The provisional application does not disclose a reaction system that includes a control system which is "adapted to test the portion of the reaction system prior to actuation of the motor, and where the control system is adapted not to actuate the motor unless the portion of the reaction system is operational." See claim 21 in the instant application. Appellant's argument that provisional application No. 60/182,866 discloses a control system "adapted to test at least a portion of the reaction system to verify that the portion of the reaction system is operational without having to operate the reaction system" is not persuasive. The provisional application No. 60/182,866 also does not teach a reaction system that disables the motor if the reaction system is not operable. The provisional disclosure does not even disclose "inoperability" of a reaction system and does not relate the inoperability of the reactions system to disablement of the motor. In fact, it is not clear what is considered to be a reaction system. The reaction system in the instant application is controllable to disable the cutting tool if the dangerous condition is detected and includes "a capacitor adapted to store electrical charge and to trigger the disabling of the cutting tool upon discharge of at least part of the electrical charge" as set forth in claim 2 in the instant application. Clearly, this type of reaction system is not disclosed in the provisional application No. 60/182,866.

b. Appellant's argument that Razzano should not be considered because it is outside the proper scope and content of the art is not persuasive. In response to appellant's argument that Razzano is nonanalogous art, it has been held that a prior art reference must either be in the

field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Razzano teaches a brake mechanism similar to the brake mechanism in Yoneda and Mowery, which includes a brake pawl for stopping a rotating member. Therefore, both brake mechanisms are art-recognized equivalents and consider to be pertinent to applicant's brake mechanism that has a brake pawl for stopping a rotating member. Therefore, the self-testing feature of one of the art-recognized equivalents braking mechanisms can be used with the other braking mechanism.

c. Appellant's argument that Razzano fails to teach a control system as recited in claim 20 is not persuasive. The control unit 32 detects the wear of the block 8 of friction material at all time. See col. 3, lines 27-34. In order for the detection circuit to find the difference in potential between the terminals 30 and 35, the friction block 8 does not have to operate or to be actuated. See col. 17-27 and Fig. 6 in Razzano. In addition, when the brake pad 1 is jammed with respect to the brake disk 2, the control unit detects the operability of the brake pad without actual operation of the brake pad, since the brake pad cannot be operated or actuated to contact the brake disk 2. Razzano recites, "in the event central control unit 32 detects no electric signal when braking, or detects a contact abnormal signal in any operating condition, this may mean, for example, that brake pad 1 is jammed with respect to the brake disk 2, that detector 14, 109 is not connected properly to brake pad 1,or the circuit connecting the detector to the central unit is damaged." See col. 4, lines 28-37 in Razzano. This indicates that the brake pad could be checked without being operated or actuated. Furthermore, if the wire 129 that connected the

brake pad 1 to the control unit 32 is broken or disconnected from the brake pad 1, the control unit determines the operability of the brake pad without operating the brake pad.

d. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. In this case, it is within the knowledge of a person of ordinary skill in the art to use a monitoring mechanism for the brake pawl in a braking mechanism of a rotating member as a disk for a similar brake pawl in a braking mechanism for a rotating member as a saw, since both braking mechanisms are similar and function the same. Appellant's argument that a person of ordinary skill in the art would not look at the system for monitoring the wear of vehicle brake shoes when thinking about how to make saws safer is not persuasive. A monitoring device for a brake pawl could be use for monitoring the brake pawl wear in any device or machinery that at least has a brake pawl contacting a rotating member. Naturally, this monitoring system enhances the safety of the device or the machinery by informing the operator about the condition of the brake pawl. The fact that the rotating member is a disk or a saw does not change the function of the brake pawl and monitoring system. In other words, the brake pawl and monitoring system work the same whether the rotating member is a rotating disk or a rotating saw. Therefore, the monitoring system for the brake pawl could be used with either a rotating disk or a rotating saw.

e. Appellant's argument that Doherty does not teach or suggest a control system as claimed in not persuasive. Yoneda, as modified by Razzano, teaches that if the reaction system is not operable a waning signal is generated. See lines 15-20 in Razzano. The warning signal is generated in the case that the brake shoes wear beyond the threshold. This is also taught in Kobayashi et al. (3,716,113). Yoneda, as modified above does not teach that the control system disables the motor if the reaction system is not operable. However, the use of control system to generate a warning signal in the case of emergency or to disable the motor instead of generating a warning signal in the case of emergency is well known in the art such as taught by Doherty. Doherty teaches a control system that generates a warning signal and disables the motor 80 in the case of inoperability of the safety panel that covers a machine. See Figs. 1-3 and col. 3, lines 40-67 and col. 4, lines 1-67 in Doherty. It would have been obvious to a person of ordinary skill in the art to provide Yoneda's woodworking machine, as modified above, with the control system that generates warning signal and shuts down the motor in the case that the reaction system in not operable. Because, shutting down the motor and generating a warning signal simultaneously improves the reaction system and safety of the machine. As stated, above Doherty teaches that the warning signal could be accompanied by disablement of the motor in the case that the safety mechanism is not operational. Therefore, the same concept can be used to enhance the safety of the saw machine in Yoneda, as modified by Razzano, when the safety system is not operational.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Ghassem Alie

05/30/07Conferees:

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SUPERVISORY PATENT EXAMINER